

Complete Listing of Claims

Claim 1 (cancelled)

Claim 2 (cancelled)

Claim 3 (cancelled)

Claim 4 (cancelled)

Claim 5. (currently amended) The method of Claim 34, wherein the manipulator apparatus provided further comprises:

- a) one of said first and second track members is movable independent of the other track members member.

Claim 6 (currently amended) The method of Claim 34 wherein:

- a) said hydraulic actuator of the manipulator apparatus provided further comprises a plurality of actuator pistons; and
- b) each of said first and second track members of the carriage assembly of the manipulator apparatus provided is independently operated by a respective carriage piston.

Claim 7 (currently amended) The method of claim 6, wherein:

- a) a the displacement of a the first and second carriage piston pistons is substantially similar to a the displacement of a corresponding actuator piston.

Claim 8. (currently amended) The method of Claim 7 wherein the manipulator apparatus provided further comprising comprises:

- a) means for synchronizing a displacement of a carriage piston with a displacement corresponding actuator piston.

Art Unit: 2856

Claim 9. (currently amended) The method of Claim 8, the manipulator apparatus provided further comprising:

- a) hydraulic lines for connecting said actuator pistons with said carriage pistons;
and
- b) means for pressurizing said hydraulic lines.

Claim 10 (cancelled)

Claim 11 (cancelled)

Claim 12 (cancelled)

Claim 13 (cancelled)

Claim 14 (cancelled)

Claim 15 (cancelled)

Claim 16 (cancelled)

Claim 17 (cancelled)

Claim 18 (cancelled)

Claim 19 (cancelled)

Claim 20. (currently amended) The method of Claim 34, ~~further comprising~~ wherein the manipulator apparatus provided further comprises:

- a) first means for moving said tool carrier in a circumferential direction of the work piece, said first means comprising a track member operably connected to said carriage assembly and movable relative thereto; and
- b) second means for rotating said tool carrier relative to the work piece, said second means comprising a plurality of track members operably connected to said carriage means assembly; each track member independently movable relative to said carriage assembly.

Claim 21 (cancelled)

Claim 22. (cancelled)

Claim 23. (cancelled)

Claim 24. (cancelled)

Claim 25. (currently amended) The method of claim 24 34 wherein:

- a) said hydraulic actuator of the manipulator apparatus provided comprises first and second actuator ~~comprises a plurality of second~~ pistons corresponding to said first and second pistons of the carriage assembly.

Claim 26. (currently amended) The method of Claim 25 wherein the manipulator provided further comprising comprises:

- a) means for synchronizing a displacement of one of said first and second carriage assembly pistons with a displacement of a corresponding actuator ~~second~~ piston.

Claim 27. (currently amended) The method of Claim 26, wherein the manipulator apparatus provided further comprising comprises:

- a) hydraulic lines for connecting said first and second carriage assembly pistons and said first and second actuator pistons; and
- b) means for pressurizing said hydraulic lines.

Claim 28. (currently amended) The method of Claim 25, wherein:

- a) said first and second carriage assembly pistons and said first and second actuator pistons comprise double acting pistons.

Claim 29. (currently amended) The method of Claim 34, wherein the manipulator apparatus provided further comprising comprises:

- a) secondary actuator for operating said hydraulic actuator.

Claim 30. (previously amended) The method of Claim 29, wherein:

- a) said secondary actuator is positioned remote from said hydraulic actuator.

Art Unit: 2856

Claim 31. (currently amended) The method of Claim 30, wherein the manipulator apparatus provided further comprising comprises:

- a) means for detecting the position of the miniature tool relative to a the work piece.

Claim 32. (currently amended) The method of Claim 31 wherein:

- a) the miniature tool comprises an ultrasonic testing probe; and
- b) said position detecting means of the manipulator apparatus provided comprises an encoder operably connected to said hydraulic actuator.

Claim 33. (currently amended) The method of Claim 32, further comprising:

- a) providing an imaging means for displaying information about the work piece.

Claim 34. (currently amended) A method of remote delivery and manipulation of a miniature tool adjacent a work piece in a restricted space, comprising the steps of:

- a) providing a manipulator apparatus, the manipulator apparatus comprising:
 - i) a tool carrier;
 - ii) a carriage assembly for manipulating the tool carrier relative to a work piece, the carriage assembly including first and second movable track members;
 - iii) the carriage assembly including first and second pistons for operating the first and second track members, respectively; and
 - iv) a remote hydraulic actuator for operating the carriage assembly;
- b) delivering the manipulator apparatus by a conveyor and positioning adjacent a desired area of the work piece; and
- c) operating the carriage assembly by actuating the remote hydraulic actuator thereby causing one or both track members move relative the work piece.

Claim 35. (original) The method of Claim 34, wherein:

the step c) comprises moving the first and second track members substantially simultaneously to thereby cause the tool carrier to move along a single direction relative to the work piece.

Claim 36. (original) The method of Claim 34, wherein:

the step c) comprises moving only one of the first and second track members to thereby cause the tool carrier to rotate relative the work piece.